

Application No. 10/789,088
Reply to Office Action of August 9, 2005

Docket No.: NY-KJT 367-US

REMARKS

In light of the above-amendment and remarks to follow, reconsideration and allowance of this application are requested.

Drawings have been objected to under 37 C.F.R. 1.83(a) for failing to show the frame member. Applicant respectfully directs the Examiner's attention Figs. 2-11 which clearly show the frame member 51. Accordingly, applicant respectfully request that the objection to the drawings be withdrawn.

Specification has been carefully reviewed and amended where appropriate to correct any inadvertent errors.

Claims 1-6 have been canceled and rewritten as new claims 7-14. Accordingly, claims 7-14 are presented for consideration.

Claims 1 has been objected to because of a minor informality. Claim 1 has been canceled and rewritten as new claim 7 satisfying such objection.

Claim 1, 2, 4 and 5 have been rejected under 35 U.S.C. 102(b) as allegedly being anticipated by U.S. Patent No. 5,119,174 to Chen (Chen). Claims 1-5 have been rejected under 35 U.S.C. 102(c) as allegedly being anticipated by U.S. Patent No. 6,874,910 to Sugimoto et al. (Sugimoto). Claim 6 have been rejected as being unpatentable over Sugimoto. Claims 1-6 have been canceled and rewritten substantially as new claims 7 and 10-14, which are patentably distinguished from Chen and Sugimoto.

Contrary to the Examiner's assertion, neither Chen nor Sugimoto independently or in combination teaches or suggests a reflector unit comprising "a rigid frame member; and a reflector connected with an inner side of said frame member and supported to said frame member" as required by new independent claim 7.

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Chen describes a PCB having a PCB base 12 and copper foils 21, 22, and a bowl-shaped reflector dish 14 formed from the copper foil 21 on top surface of the PCB base 12. (Figs. 2 and 3; col. 2, lines 12-31). Applicant respectfully submits that the copper foil 21 alleged by the Examiner as being equivalent to applicant's frame member is not rigid and is at best equivalent to applicant's metal substrate layer 45 of the PCB P (see Figs. 5, 6 and 11).

Sugimoto recites a Japanese published application no. 01-311501 as a prior reference, which describes a LED lighting fixture. The PCB 91 includes a thin metal substrate 912 and an insulating layer 913 covering the top surface thin metal substrate 912 (Fig. 25; col. 3, lines 2-4). Applicant respectfully submits that the insulating layer 913 of the PCB 91 alleged by the Examiner as being equivalent to applicant's frame member is at best equivalent to applicant's insulating ceramic layer 46 of the PCB P (see Figs. 5, 6 and 11).

Applicant respectfully submits that only the present invention teaches or suggests a reflector unit comprising a rigid frame member and a reflector which is connected with and supported to the rigid frame member as required by new claim 7.

Of course, a rejection based on 35 U.S.C. §102 as the present case, requires that the cited reference disclose each and every element covered by the claim. *Electro Medical Systems S.A. v. Cooper Life Sciences Inc.*, 32 U.S.P.Q.2d 1017, 1019 (Fed. Cir. 1994); *Lewmar Marine Inc. v. Barient Inc.*, 3 U.S.P.Q.2d 1766, 1767-68 (Fed. Cir. 1987), cert. denied, 484 U.S. 1007 (1988); *Verdegaal Bros., Inc. v. Union Oil Co.*, 814 F.2d 628, 631, 2 U.S.P.Q.2D 1051, 1053 (Fed. Cir.), cert. denied, 484 U.S. 827 (1987). The Federal Circuit has mandated that 35 U.S.C. 102 requires no less than "complete anticipation ... [a]nticipation requires the presence in a single prior art disclosure of all elements of a claimed invention arranged as in the claim." *Connell v. Sears, Roebuck &*

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Co., 772 F.2d 1542, 1548, 220 U.S.P.Q. 193, 198 (Fed. Cir. 1983); *See also, Electro Medical Systems*, 32 U.S.P.Q. 2d at 1019; *Verdegaal Bros.*, 814 F.2d at 631.

Therefore, since Chen and Sugimoto independently or in combination fails to describe significant elements of recited by claim 7, it follows that Chen and Sugimoto independently or in combination does not anticipate or render obvious claim 7, or any of claims 8-14 dependent on claim 7.

Moreover, to establish a *prima facie case* of obviousness, three basic criteria must be met. First there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991); MPEP 2143. Here, the Examiner has failed to establish a *prima facie case* of obviousness because Chen and Sugimoto independently or in combination does not teach or suggest all the claim limitations of amended claim 1 and thus also included in dependent claims 2-4, 6 and 7.

Additionally, applicant respectfully submits that neither Chen nor Sugimoto independently or in combination teaches or suggests a frame member which is rigidly formed in unison with the reflector as required by new claim 8.

Further, applicant respectfully submits that neither Chen nor Sugimoto independently or in combination teaches or suggests a rectangular frame member having long-side portions and short-side portions as required by new claim 9.

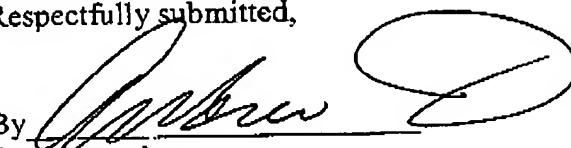
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On the basis of the above amendment and remarks, reconsideration and allowance of claims 7-14 are respectfully requested.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 50-0624, under Order No. NY-KIT 367-US (10402619) from which the undersigned is authorized to draw.

Respectfully submitted,

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Attachment: Replacement Page 14

substantially cover the entire length 9 (main scanning direction length) of the LED array. Opposed terminal ends of this reflector 52 are joined to the opposed short-side portion 51b of the rectangular frame member 51 surrounding the circumference of the reflectors 52. Both the long-side portions 51a and the short-side portions 51b have a larger cross section than that of the reflector 42 and formed and joined together in the form of rectangle. Accordingly, these portions have high rigidity and can support the reflectors 52 in a reliable manner. Each reflector 52 includes the inclined reflecting face 52a which is to be located to face the LED elements 9 which the reflector 52 is surface-mounted on the board. This inclined reflecting face 52a reflects the beam from the LED elements 9 toward the object to be illuminated.

Fig. 10 (b) shows a modification of the reflector unit 50. This unit differs from the reflector unit 50 shown in Fig. 10(a) in that the flat face is formed on the top of the reflector 52 and the above-described relay land 52b made of a conducting material such as copper is formed on this flat face.

As can be seen from Fig. 11 which is a section of the area of the printed circuit board P surface-mounting the LED elements 9, the bonding wire 61 extending and connecting between the LED element 9 and the printed circuit wiring (wiring land) W is laid in such a manner that the wire 61 leaps over the reflector 52. And, the wiring land W is laid at an area or gap formed between the reflector 52 and the frame member 51 of the mounted reflector unit 50. Incidentally, in this particular embodiment, the reflector 52 has a height of about 1 mm and the gap between the reflector 52 and the LED element 9 has a width of about 0.5 mm.

As may be clearly seen from Fig. 8 and Fig. 9, the printed circuit wiring (wiring land) W includes a light-emitting wiring portion 53 for supplying power to the LED elements 9, a heating wiring portion 54 for supplying power to the chip resistors CR and a metering wiring portion 55 for applying a potential to a chip thermistor S acting as a temperature